



Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

STUDIES IN NORTH AMERICAN PERONOSPORALES—VII. NEW AND NOTE-WORTHY SPECIES

GUY WEST WILSON

PERONOSPORA GRISEA Unger

This is one of the rarer members of the genus, at least in America. It is confined to various species of *Veronica* in the northern portion of the United States and Canada, as well as in Europe. It was with considerable interest that this species was found in the field last spring near Carmel, Indiana, where in April it was very abundant on the young plants of *V. arvensis* L., causing a pronounced and conspicuous yellowing of the infected leaves. It persisted through May, and during the latter month it was found sparingly in the same locality on *V. peregrina* L. On this host, the surface discoloration was red, very similar to that caused by the work of aphids. In this connection it might be of interest to note that in the case of other species of *Peronospora* which normally cause a yellowish discoloration of the host, especially *P. Polygoni* Thüm., this was of a decided reddish cast during the cold, wet weeks of spring. In early June, the normal color was the prevalent one.

PERONOSPORA SEYMOURII Burrill

This species was abundant on *Houstonia minor* (Michx.) Britton at Iowa City, Iowa, in April, 1915. So far as the writer knows, but two previous collections have been recorded. The type was collected in Union county, Illinois, by Prof. Seymour, the other collection being made in Alabama by Dr. Underwood.¹ In the Iowa material, the oöspores are produced abundantly in the fruits of the host, causing a slight hypertrophy and a decided purplish color.

¹ Underwood, Bull. Torrey Club 24: 83. 1897.

Rhysotheca Acalyphae sp. nov.

Hypophyllous, forming a dense or very sparse, whitish growth on the host, epiphyllous discoloration prominent, yellowish to dark-brown, appearing to cause dead spots on the leaves, often accompanied by a pronounced tinge of red on the under side of the leaf; conidiophores solitary or only 2 or 3 from a stoma, $300-500 \times 5-7 \mu$, 4-5 times branched, forming a loose, open head of about $\frac{1}{2}$ to $\frac{1}{3}$ the total height, branches elongate, straightish, branchlets sometimes at a very small angle, ultimate branchlets straight, slightly flexed, short, $4-10 \mu$ long, more or less conic and broadly truncate; conidia brownish, ovoid to globose, $12-22 \times 10-16 \mu$; oöspores not seen.

The type on *Acalypha virginica* L., Madison, Wisconsin, Sept. 30, 1915, T. T. Davis.

This species is not to be confused with any other on euphorbiaceous hosts, as the others are all undoubted members of the genus *Peronospora*. Its nearest ally is *R. illinoisensis* (Farlow) Wilson, from which it differs in its more pronounced discoloration of the host; the larger conidiophores, which branch more; and the shorter apical branchlets. The conidia are very similar, both in size and form. It is also quite similar to *R. australis* (Speg.) Wilson, from which it differs in having more delicate conidiophores and larger conidia. The apparent dead spots on the host are rather remarkable, as they are by no means common in this group of fungi.

For those who follow Saccardo, this species may be designated as **Plasmopara Acalyphae** Wilson.

KANSAS ACADEMY OF SCIENCE,
LAWRENCE, KANSAS.